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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/718,509

11/20/2003

Michael J. Czaplicki

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EXAMINER

BRINSON, PATRICK F

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/718,509	Applicant(s) CZAPLICKI ET AL.	
	Examiner Patrick F. Brinson	Art Unit 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16, 23-35, 38 and 45 is/are allowed.
- 6) ☒ Claim(s) 17-22, 36, 37, 39-41, 43 and 44 is/are rejected.
- 7) ☒ Claim(s) 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-22 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 4-158009 to **Takao**.

The **Takao** reference discloses a method of reinforcing at least a portion of a hollow cavity of an automobile including providing a structure defining a hollow cavity, inserting a flexible barrier (bag) within the cavity for dividing the cavity into one or more sections, and a foaming, reinforcement material for filling the one or more sections, wherein the sections filled by the foaming material is internal of the flexible barrier member and wherein the reinforcement material substantially assists in increasing the strength and stiffness of the structure, as recited in claims 18-20. It is further disclosed that the flexible barrier is a bag formed of a thermoplastic adhesive (polymeric material), as recited in claim 21. The automobile body is carried to a drying (heating) system, or the pillar (1) is heated locally to heat the bag to a temperature slightly higher than the softening temperature of the thermoplastic adhesive constituting the bag (3). It is disclosed that the bag does not necessarily have

to be provided at the top of the bag, as shown, but can be made on the side, depending on the relationship to the structure to be packed or the relation of the hole in the structure.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 36, 37 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao** in view of U.S. 4,269,890 to **Breitling et al.**

Takao discloses, as discussed previously, the recited method steps with the exception of inserting the flexible barrier prior to introducing the reinforcement material therein. The patent to **Breitling et al.** discloses a process for introducing foam into automobile body cavities, wherein the bag is initially in a collapsed position, fig. 1 and then expanded to substantially fill the cavity, as shown in fig. 2. Col. 2, lines 63-66, discloses that compressed air may be temporarily forced into the bag so that the bag changes or expands from the irregular position to an expanded one. It would have been obvious to one having ordinary skill in the art at the time the

invention was made to inflate and expand the barrier as suggested by **Breitling et al.** in order to ensure that the barrier has assumed the proper position within the cavity.

3. Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao**.

The **Takao** reference discloses the recited structure with the exception of specifically inserting the flexible barrier into a cavity from an open end of the structure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the barrier at a desired point of reinforcement, whether it is the end or a point between ends.

4. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Takao** in view of U.S. 4,995,545 to **Wyeech**.

The patent to **Takao** does not specifically disclose the temperature for activating expansion of the reinforcement material. **Takao** discloses that the method may include a reinforcing material that is heated when the bag is heated and alternatively the reinforcing material foams exothermically with a catalyst. The patent to **Wyeech** discloses a method of reinforcing a hollow automobile structure including providing a thermosetting resin within the structure that is allowed to cure and support the structure from within. It is disclosed that a preferred resin is an epoxy resin due to its excellent adhesion characteristics, rapid rate of curing and high

strength exhibited when fully cured. The resin includes expandable micropheres that expand, contacting the surrounding structure, filling any small voids and conforming to irregular surfaces. The beads are thermally activated by heat generated in the exothermic polymerization reaction at temperatures between about 100C to about 120C. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute for the expandable material of **Takao**, an expandable material formed of the material of **Wyeech** in order to fill the barrier with a quick curing, high strength filler that will strongly support the automobile structure.

Allowable Subject Matter

5. Claims 1-16, 23-35, 38 and 45 are allowed.
6. Claim 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

7. Applicant amended the claims 1, 17, 18 and 36. Claims 17, 18 and 36 continue to remain rejected, however the reference to **Takao** is now being use to make the rejection wherein **Takao** discloses a method of reinforcing an automobile structure including providing a flexible barrier, specifically a thermoplastic bag having an outer

adhesive layer, and within which is provided a thermally activated expandable polymeric reinforcement and further discloses the step of providing external heat to the structure to expand the reinforcement material to form a structural foam that adheres to adjacent surfaces. Claim 1 is allowed wherein no reference discloses exposing an expandable polymeric reinforcement material to an external source of heat at a temperature ranging from approximately 93C to 204C. Though **Eipper et al.** discloses external heating of 130 C, however the reinforcing material is carbon powder and the barrier layer is aluminum foil.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from

the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Patrick F. Brinson** whose telephone number is (571) 272-4897. The examiner can normally be reached on M-F 7:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Kevin P. Shaver** can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Patrick F. Brinson/
Primary Examiner, Art Unit 3754

P. F. Brinson
February 4, 2009